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Marketing of Lumber By Retail Lumber Yards In the Northeast — Phase III

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AGRICULTURAL EXPERIMENT STATION

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NORTHEAST REGIONAL PUBLICATION

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Marketing of Lumber By Retail Lumber Yards In the Northeast — Phase III

This bulletin was prepared by a sub-committee of the Northeastern NEM-24 Technical Committee. The preliminary work of planning for data analysis and bulletin organization was done by Samuel Brock, Henry H. Webster, and Oliver P. Wallace, Sr., chairman of the Phase III sub-committee. Data analysis was done by Eugene B. Penick, Jr. and the chairman. Preparation of all graphs and charts and initial writing of the bulletin was done by Eugene B. Penick, Jr. Review and re-writing were done by Oliver P. Wallace, Sr. with assistance from Robert S. Bond.

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SUMMARY

This study of northeastern retail lumber yards was undertaken to describe the activities of these yards and to determine the extent of their influence on lumber marketing.

Northeastern region retail lumber yards are primarily corporations. The latter account for nearly 80 cents of each dollar spent at all retail yards, and over 90 percent operate only one yard. Fifty-two percent of all yards have an annual gross dollar sales volume under $300,000. The other, larger yards, sell nearly three times the volume (in dollars) of those with sales under $300,000. The number of employees per $100,000 of gross sales declines steadily from seven for the smallest yards to two for yards with gross sales over one million dollars.

Yards offer a variety of products and services. While wood products dominate sales, lumber dollar sales volume is only 39 percent of total gross sales dollars. Larger yards offer a greater variety of products and tend to include many non-wood related items.

Retailers show a substantial preference for western lumber, 70 percent of purchased volumes. Quality, lengths, volume available, and species characteristics are cited as major reasons. They do shop around for the best price and buy 32 percent directly from sawmill producers. Canadian imports, 14 percent, are second in volume while Eastern species comprise only 11 percent of total lumber purchases. The volume of dimension lumber purchased is nearly twice the volume of boards with 75 percent of the former in western species.

Retail yards sell primarily to three consumer groups: building contractors, home owners, and industrial plants. Nearly 50 percent of all sales are to building contractors, 30 percent to home owners, 12 percent to industries, and the remaining volumes to all other consumers. The larger yards sell more volume to contractors while smaller yards sell more volume to home owners. Sales to building contractors are most important in Massachusetts, Vermont, and New Hampshire. Sales to home owners dominate in West Virginia and Maine. Massachusetts has the greatest proportion of sales to industries.

Retail lumber yards sell a quality product, primarily dimension lumber from western species to building contractors. But home owners are apparently strongly oriented to "do-it-yourself" projects as nearly one-third of retail yard lumber sales are to these people. Although wood products represent the major proportion of annual gross dollar sales volume, larger yards sell a substantial dollar volume of non-wood items.

MARKETING OF LUMBER BY RETAIL LUMBER YARDS IN THE NORTHEAST — PHASE III

INTRODUCTION

Most lumber to be used in construction is purchased from retail lumber yards. A New Hampshire study[1] showed that 56 percent of construction consumer purchases were directly from retail lumber yards. A Maine study[2] showed that in northeastern metropolitan areas 90 percent of the building contractors purchased the lumber they used from retail lumber yards. Another study of lumber marketing by sawmills in the Northeast[3] showed that sawmill owners sell a large proportion of their lumber to retail and wholesale lumber yards. The New Hampshire study showed that 83 percent of wholesale yards' eastern lumber is sold to retail yards. Thus retail lumber yards are a key link in the lumber markets between the producer and the consumers.

The selection of species and grades of lumber to be carried in stock by retail yards dictates to a large extent the market for lumber from marketing intermediaries and lumber manufacturers. This demand for wood and wood products can benefit those producers with the ability and foresight to detect trends and then to set their productive facilities to work meeting the requirements that retailers find through their sales to consumers. The firm producing the grade and quantity desired at the opportune time will benefit economically.

A major element affecting the marketability of eastern species is the knowledge of marketing opportunities by eastern lumber manufacturers. Phase II, "Marketing Lumber in the Northeast," stated: "Many lumber suppliers have only fragmentary knowledge of the alternatives open to them in marketing their sawmill products." One indication of the alternatives open to any producer can be found in the detailed study of the operations of retail lumber yards.

The Northeastern Regional Lumber Marketing Project, NEM-24, is a major cooperative effort to provide a better understanding of the lumber marketing chain. Phase I of this project described lumber marketing in the northeast by lumber producers. Phase II described lumber marketing in this region as indicated by the purchases of lumber by secondary manufacturers or other industrial users. Information presented in this report was collected as Phase III of the Northeastern Regional Marketing Project, NEM-24. Planning and data collection were carried out by the Agricultural Experiment Stations of Maine, Massachusetts, New Hampshire, Pennsylvania, Vermont, and West Virginia, with the cooper-

[1] Wallace and Amidon. 1958. Marketing of Eastern White Pine lumber from Maine and New Hampshire. N. H. Agric. Exp. Sta. Bull. No. 452.

[2] Brock, S. M. 1963. Marketing Maine lumber to the Northeastern Building Construction Industry. Maine Agric. Exp. Sta. Bull. 615.

[3] Christensen et. al. 1962. Marketing of lumber produced by sawmills in the Northeast — Phase I. West Va. Univ. Agric. Exp. Sta. Bull. No. 478.

ation of the Northeastern Forest Experiment Station, U.S.D.A. The data were compiled at the New Hampshire Agricultural Experiment Station.

This report continues the previous two studies of the NEM-24 series by describing another segment of the market structure for lumber. It is intended to describe (1) the flow of lumber to retail lumber yards, (2) the lumber purchased by and services sought and offered to building contractors, home owners, and other domestic consumers, and (3) the factors influencing purchases of eastern and non-eastern lumber by domestic consumers.

RESEARCH PROCEDURE

Direct interviews with owners and operators of retail lumber yards were recorded on prepared questionnaires. Samples of yards were taken from BOASI[1] lists. However, all states participating in this study reported that the lists were not completely satisfactory as some building contractors were included and known retail dealers were found listed as lumber producers or not included at all. The exact size of the population in some states was, therefore, uncertain. A total of 542 firms were used for analysis from the total of 1,362 listed by BOASI for the participating states. Over 600 firms were actually contacted.

Table 1. Number of Firms by States — BOASI List and Number Sampled.

	BOASI	No. Sampled
Maine	91	47
New Hampshire	52	52
Vermont	20	36
Massachusetts	334	156
Pennsylvania	761	172
West Virginia	104	79
	1362	542

Several large multi-yard firms have retail outlets in more than one state so that state volumes of lumber are not representative of their actual transactions. Thus, while strong differences between states are stressed in this report, the effect of these multi-yard firms on a particular state is not shown by the state figures.

Description of the retail lumber yard businesses in the northeast is derived from the yards studied and follows the format of the questionnaire. The latter was developed by a sub-committee, strengthened and approved by the whole technical committee in a working session.

[1] Bureau of Old Age and Survivors Insurance, Standard Industrial Classification No. 5211.

FIRM ORGANIZATION

Ownership Patterns

Retail lumber yards in the Northeast fall under three major types of ownership: corporations, single proprietorships, or partnerships (Figure 1). These comprise 99 percent of all ownerships in the region, with corporations owning 67 percent, single proprietorships owning 21 percent, and partnerships controlling the remaining 11 percent. About one percent of the firms are under unspecified types of ownership.

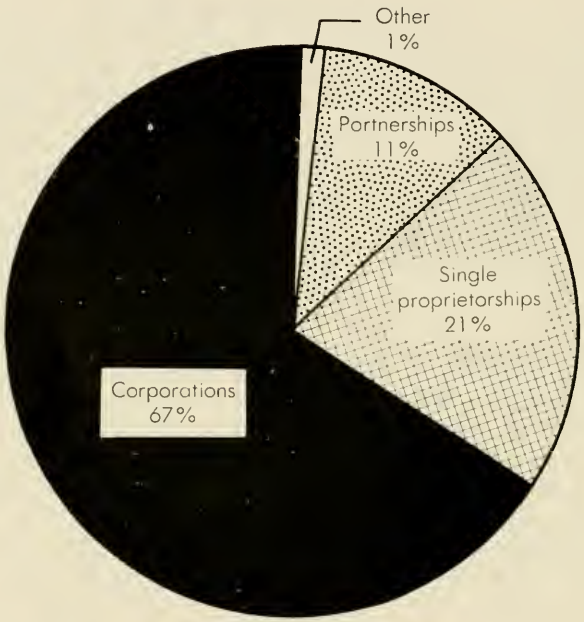

FIGURE 1. OWNERSHIP PATTERN OF REGIONAL RETAIL YARDS AS A PERCENT OF TOTAL YARDS.

In general, the corporation yards are large, efficient enterprises, selling in quantity and serving relatively large consumer areas. Although many of these yards purchase from local market intermediaries or wholesalers, some are retail branches of vertically integrated corporations which manufacture lumber and wood products. In such cases, the retail yard may serve as outlet for company produced goods.

The corporation has gained a strong position in the retail yard industry in the northeast. Their success lies in the several advantages inherent in large scale merchandising. These include greater personnel efficiency, mechanization, more and varied services, wider service areas and benefits of corporation advertising.

A breakdown of retail yards by gross dollar sales volume indicates the positions of the three ownerships relative to the size of the yard (Figure 2).

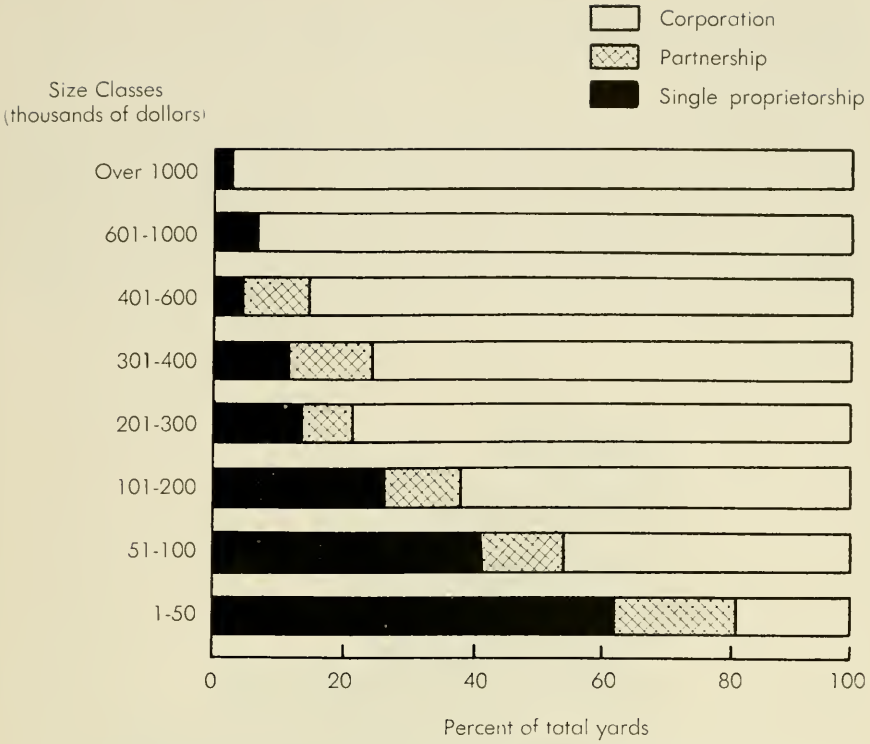

FIGURE 2. TYPE OF OWNERSHIP OF RETAIL LUMBER YARDS BY GROSS DOLLAR SALES VOLUME CLASSES.

The single proprietorship is important in yards with gross sales of $200,000 and under but it predominates only in the smallest yards. The partnership is of little importance relative to the single proprietorship and corporation. The corporation predominates in the ownership of all yards having $100,000 or more in gross sales annually, and thus dominates retail lumber merchandising in the Northeastern region. Its importance, however, lies not only in the fact that the greatest number of firms are under corporate management but that these yards account for approximately 80 cents of each dollar spent at all retail yards.

Single and Multiple-Unit Ownerships

The majority of firms in the region own and operate only one retail lumber yard. Some 92 percent of all ownerships are of this type. The remaining 8 percent of ownerships are concerns which operate two or more yards and are classed as multi-unit ownerships. These multi-unit firms are responsible for more than 20 percent of the gross dollar sales volume. The average multiple-unit yard sells over $900,000 annually in merchandise. The majority of firms in this category operate two yards each. Two multi-unit organizations own a total of 113 yards throughout

the region. About four-fifths of all multi-unit firms are corporations. The remainder are primarily single proprietorships.

Size of Firms

Firm size classes were established based on annual gross dollar sales volumes (Figure 3). Fifty-two percent of all yards are included in the classes with annual gross dollar sales volumes of $51,000 to $300,000. These yards made about one-third of the total retail yard sales. The larger yards, 43 percent of all yards, sold nearly three times the volume of the others. Seven percent of all the yards had sales over $1,000,000 and five percent had sales of less than $50,000 annually.

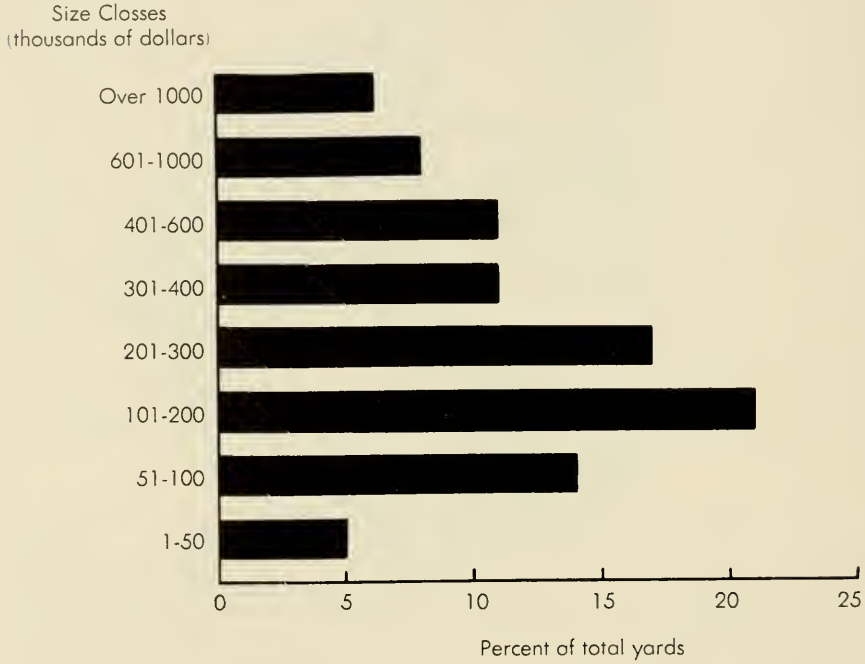

FIGURE 3. DISTRIBUTION OF RETAIL LUMBER YARDS BY GROSS DOLLAR VOLUME SALES CLASSES.

Sixty-four percent of all firms selling over a million dollars of lumber and related products are located in Massachusetts and Pennsylvania. These firms maintain headquarters in either Massachusetts or Pennsylvania but have yards in other states. Since a portion of their total dollar sales volume has to be credited to the other states, state differences are not clear.

Employment

Over 6,000 persons are employed by the 542 firms studied for this report. This represents an average of about 11.0 employees for each yard

throughout the region. The actual number employed in an individual yard, however, is governed by the size of the establishment and its labor requirements. As the gross dollar volume of sales of a firm increases, the number of employees per $100,000 of sales declines. For example, a yard in the $1,000 – $50,000 sales volume class employed an average of 3.5 persons, while a yard in the $1,000,000 plus class required almost 50 people for its labor force. However, the number of employees per $100,000 of gross sales averaged seven for the smallest class yard and only two for the largest yards. The number of employees per $100,000 of sales declines as yard size class increases (Figure 4). Thus, economies of large scale operations apply to the labor force. That is, a high ratio of capital to labor can be expected.

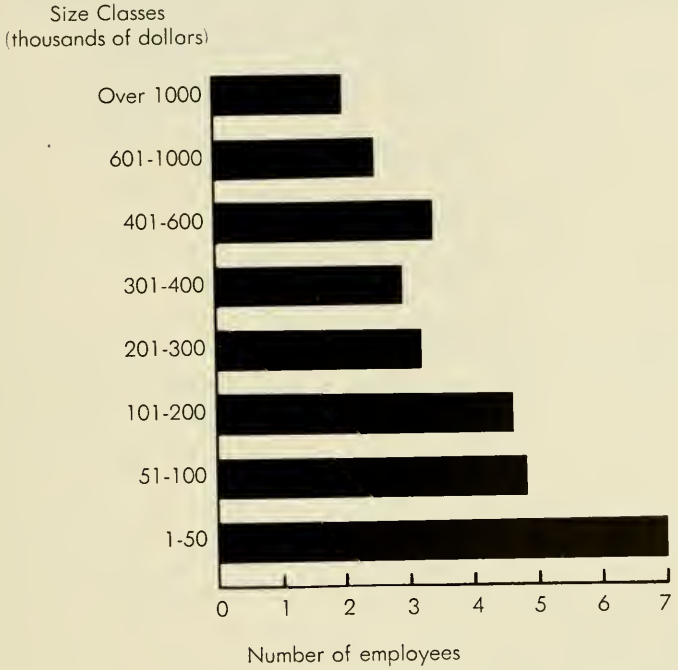

FIGURE 4. NUMBER OF EMPLOYEES PER $100,000 OF SALES BY GROSS DOLLAR VOLUME SALES CLASSES.

Average Delivery Distances

A direct correlation exists between the size of the retail yard, according to gross dollar sales volume, and the average delivery distance served (Figure 5). This delivery distance is indicative of the marketing area serviced by the various yard size classes, although considerable internal class variation may occur. Two factors have an effect on the distances to which deliveries are made at no extra charge to the customer. These are: (1) the size of the order and (2) the volume of business done with the individual customer. Larger yards serve customers who pur-

chase large amounts in single orders and who provide a high proportion of the total business, thus accounting in large part for the correlation between retailers' gross sales and delivery distance. The average delivery distance for all classes is 25 miles and is represented by those retailers in the 301-400,000 dollar sales class.

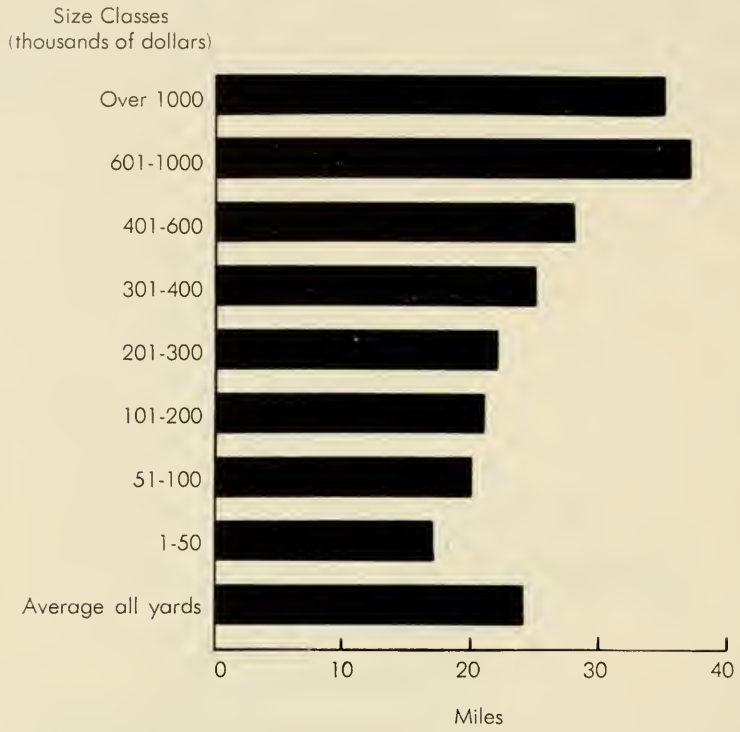

FIGURE 5. AVERAGE DELIVERY DISTANCE IN MILES FOR RETAIL LUMBER YARDS BY GROSS DOLLAR VOLUME SALES CLASSES.

Advertising Expenditures

About 49 percent of the retail yards spend between one and two percent of their gross revenues for advertising (Figure 6). Another 29 percent indicate that they spend one percent or less while six percent of the yards spend nothing on advertising. Only 14 percent of all firms spend over two percent of their gross sales in bringing their products before the public. There appears to be no significant differences in advertising expenditures by the various yard size classes. Advertising experts feel that two percent of gross sales is a sound advertising budget and less than one percent is almost certain to be inadequate, regardless of dealer size or location.[1]

[1] Weyerhauser Company. How to Plan Advertising for Profit: A management guide for retail lumber dealers. Loose leaf, p. 16.

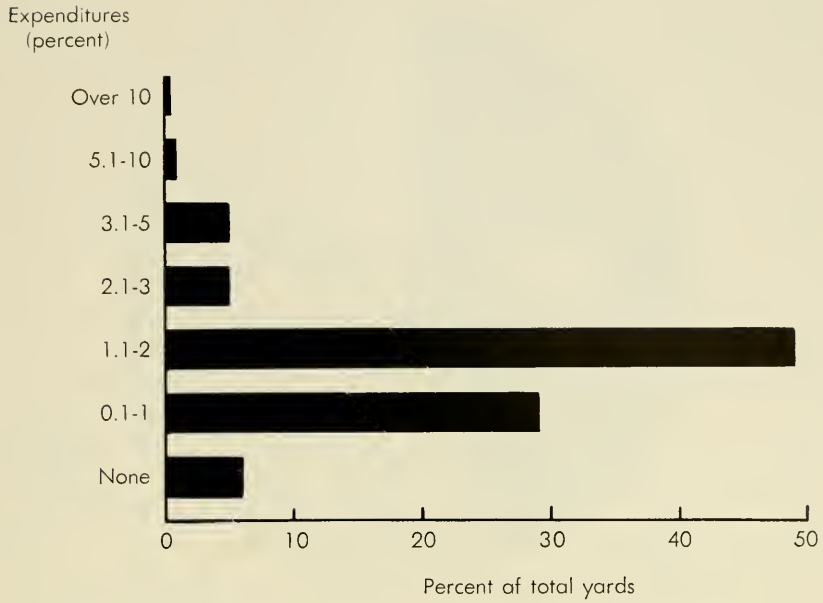

FIGURE 6. ADVERTISING EXPENDITURES AS A PERCENT OF GROSS DOLLAR SALES.

The proportion of consumer, contractor and industrial sales is also a factor influencing advertising expenditures. What appeals to home owners does not generally appeal to industrial buyers so that advertising methods may differ according to the market outlet.

COMMODITIES HANDLED BY RETAIL YARDS

Lumber sales comprise approximately 39 percent of the gross dollar sales by retail lumber yards in the region (Figure 7). An additional 45 percent of sales are made up of other wood products — millwork, plywood, wooden clapboard and shingles, reconstituted wood products, and flooring. The remaining sales volume is of other products, primarily hardware, paint, and non-wood exterior siding. Although lumber is no longer the major commodity sold in the retail lumber yard, wood products in various forms do comprise in excess of 75 percent of the gross dollar sales volume throughout the northeastern region.

All wood products, as enumerated above, are handled by most yards with little variation noted between size classes. No significant differences were found between states.

Non-Wood Products

Of the non-wood commodities, paint is stocked by about 90 percent of the retail yard operators. There is some variation by states for those selling paint. It ranges from 97 percent in West Virginia to 74 percent in Massachusetts. The low figure in Massachusetts may be attributed to the fact that it is a more urban state and there is greater competition

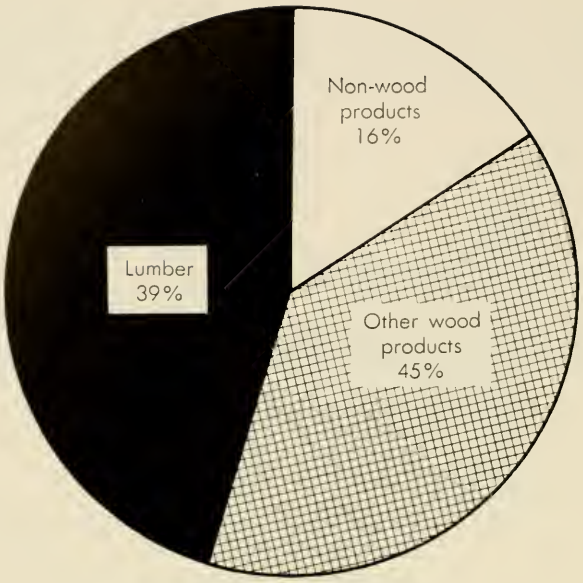

FIGURE 7. SALES OF COMMODITIES HANDLED BY RETAIL YARDS.

from outlets specializing in paint products. No correlation may be noted between yard size classes for paint sales, although a range exists from 81 to 95 percent. Hardware is universally sold by all size yards in all states. Non-wood exterior siding is sold by 72 percent of the yards, with a range from 89 percent in New Hampshire to 49 percent in Massachusetts. Characteristics of markets and degree of competition in selling this product probably account for these variations. Larger yards handle this item more frequently than do the smaller ones.

LUMBER PROCUREMENT

Retailers showed substantial preference for western lumber regardless of the market from which it was purchased (Figure 8). Even purchases from instate sources were predominately of western species. Only 19.5 percent of all lumber purchases are from producers; thus the main sources of lumber for retail yards are firms acting as market intermediaries. Some of these firms are vertically integrated, having producer, wholesaler, and retail units. Retailers purchase 35 percent of their needs instate but only 19 percent of this volume is from local producers, except for Maine, where sixty percent of retailer purchases are eastern species and from producers.

Instate Sources

Analyzing instate – outstate lumber purchases presents difficulties because Massachusetts and Pennsylvania are the main locations for most market intermediaries dealing in lumber. In New Hampshire, Ver-

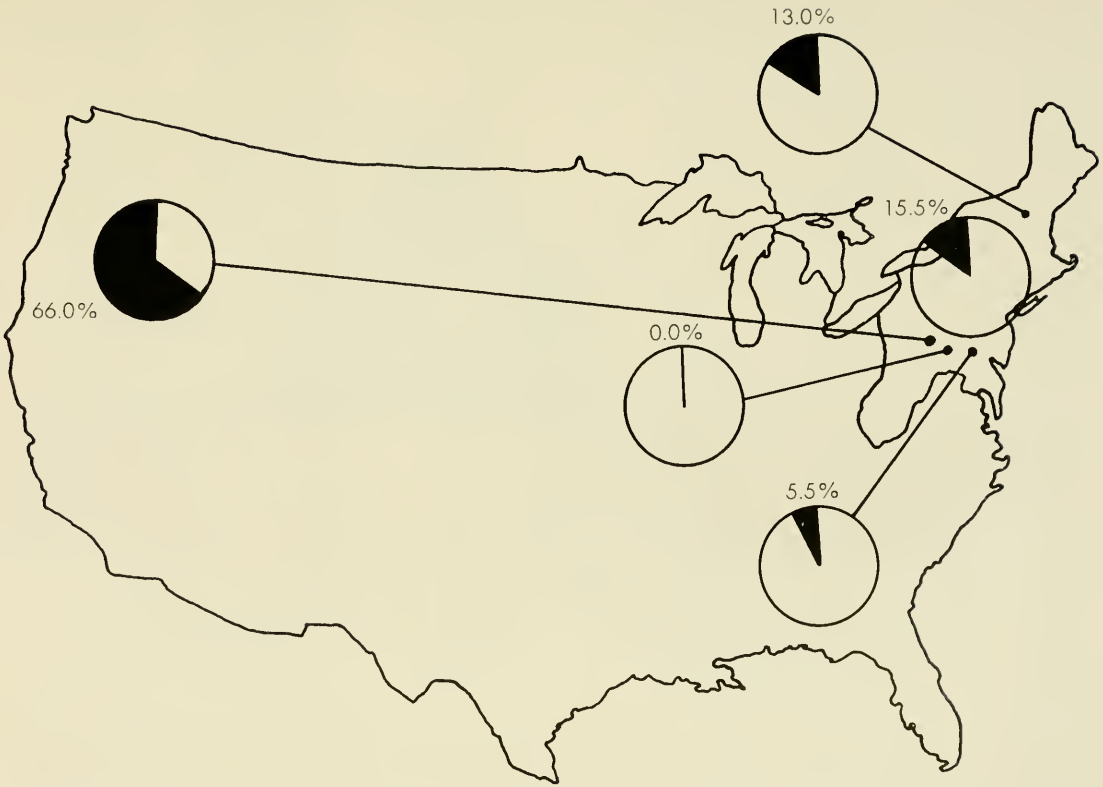

FIGURE 8. SOURCES OF LUMBER PURCHASED BY REGIONAL RETAIL YARDS IN PERCENT OF TOTAL VOLUMES.

mont. and West Virginia. 75 to 93 percent of instate softwood purchases are from local producers but this represents only 26 percent of the total lumber purchases by retailers in these states (Figure 9).

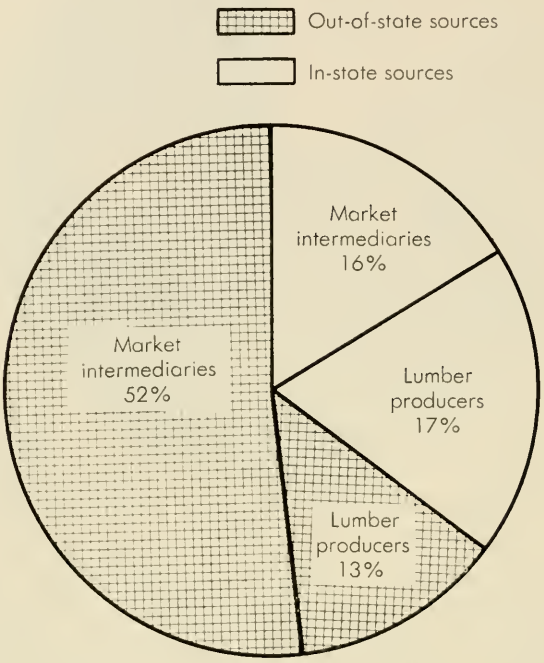

FIGURE 9. PERCENT OF TOTAL LUMBER PURCHASED FROM IN-STATE AND OUT-OF-STATE MARKET INTERMEDIARIES AND LUMBER PRODUCERS.

Outstate Sources

Eighty percent of all purchases from outstate sources are from markets intermediaries. These represent 53.5 percent of all retail lumber yard purchases. Further, 77 percent of this lumber is western species, 12.5 percent Canadian, 4.5 percent southern and 6.0 percent eastern. Retail yard size class does not seem to affect purchasing practices. Lengths, species characteristics, volume available, and quality are more important factors influencing purchase decisions.

In general, the larger yards purchase and market the bulk of retail lumber sold in the northeast. These yards normally serve a relatively large area in retail trade and are strongly competitive pricewise. In securing their lumber and wood products they buy from the source which offers the best price. Small yards are more likely to seek local sources of supply.

Lumber Delivery Methods to Retail Yards

Railroads and trucking are the methods of lumber delivery to retail yards. Over half (55 percent) of the yards receive deliveries by rail.

Variations between the states may be accounted for by several factors. One is the proximity to trans-shipment points. In Pennsylvania and Vermont, over 70 percent of lumber is delivered by rail, whereas in Massachusetts only 41 percent is delivered via railroad. Other factors affecting mode of lumber delivery are the proportion of eastern and western species, location of yards relative to railroad sidings, and the distribution of yards in rural areas.

In Maine, retailers use their own trucks to pick up nearly one-third of the volume they purchase but in all other states the seller arranges delivery of the lumber to the retail yards.

Form and Condition of Lumber Purchases

Yards procure their lumber needs in all forms — green, dried, rough, and dressed — but primarily in a air-dried, dressed form (Figure 10). Over ninety percent of all purchased lumber is finished (or dressed). Air-dried lumber is available in all four regional species. Sixty-eight percent of yard stocks of eastern and Canadian species are dried by this method, while only 32 percent of western and 50 percent of southern woods are. At least half the volume of western and southern species bought are kiln dried. Very little lumber is purchased green, only eighteen percent, but this is nearly all western species.

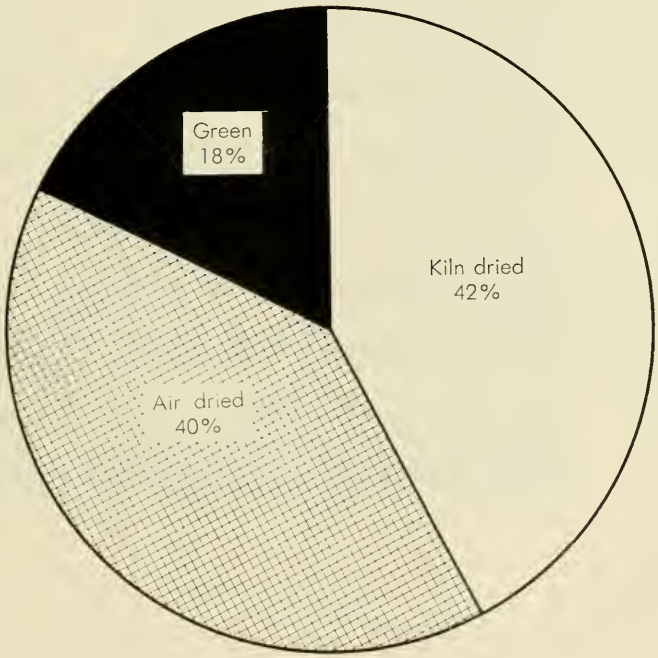

FIGURE 10. PURCHASES OF SEASONED LUMBER BY REGIONAL RETAIL YARDS — PERCENT OF TOTAL VOLUME.

CUSTOMER SERVICES

All firms in the region offer some customer services although considerable variation occurs in the types offered within states and among states. Figure 11 indicates the relative importance of customer services offered on a regional basis. Ninety-six percent of all yards offer cost estimating services. Next in importance is "cutting up of boards" (91 percent) and volume estimates[1] (90 percent). Other services frequently offered by retail yards are price comparisons[2] (78 percent), house plans (78 percent), brochures on wood use (75 percent), and do-it-yourself plans (72 percent). Wood specifications and equipment rentals are offered by slightly under one-half of the regional yards. Self-service and price stamping of lumber are services offered by only 15-20 percent of the retailers.

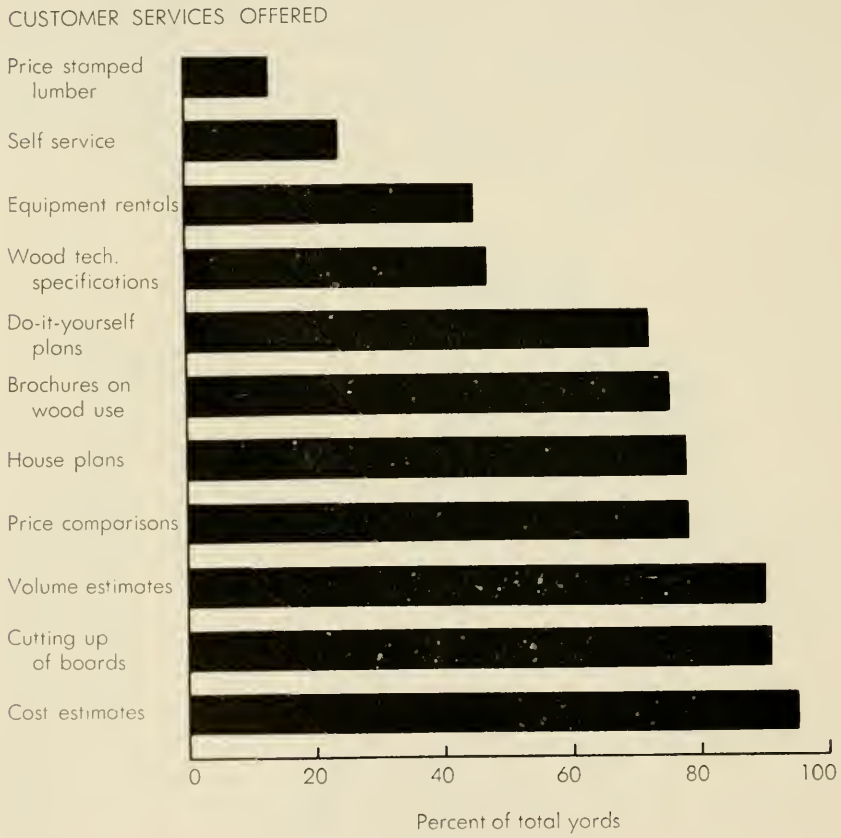

FIGURE 11. CUSTOMER SERVICES OFFERED BY REGIONAL RETAIL YARDS.

[1] Estimating amount of material needed to do the job.
[2] Between products within the yard.

Lumber and wood products are the main sales product for retail yards

Retail yards in all states except Maine and New Hampshire follow the regional pattern. Brochures on wood use are offered by less than 30 percent of their yards. New Hampshire has the greatest deviation of any state from the regional picture. In that state nearly 70 percent of the firms offer price-stamped lumber as a service and all other services are available at over 75 percent of the firms.

In general, as the size of a firm increases, quantity of services offered tends to increase. As an example: for firms providing wood specifications, 21 percent of the 1-50 thousand dollar class offer this service while 62 percent of the one million dollars and over size class firms offer it. The largest size class firms are also leaders in offering wood tech specifications, do-it-yourself plans, and price-stamped lumber.

LUMBER SALES TO CONSUMERS

The principal market for eastern softwood lumber is clearly northern New England (Table 2). Western lumber sells in greater volumes in the southern part of the region but dominates lumber sales in all states except Maine and Vermont. Southern lumber gains steadily in percent of volume as the southern end of the region is approached. Canadian lumber varies in volumes sold by states but shows no clear regional pattern.

Table 2. Percent of Lumber Volume Marketed in Each State by Regional Species Groups.

Regional Species Group	States						Region Total
	Maine	N. H.	Vt.	Mass.	Penn.	W. Va.	
			percent				
Eastern	70.0	43.8	43.1	7.6	2.3	2.8	15.5
Western	16.5	53.4	38.2	80.4	68.5	71.5	66.3
Southern	0.7	0.2	0.2	1.5	8.2	21.0	5.5
Canadian	12.8	3.6	18.5	10.5	21.0	4.7	12.7

Boards

Boards from eastern species for sale by retail yards are generally of poorer quality than those from other regions (Table 3). Over one-half of all eastern boards stocked are No. 3 common and poorer. In addition, about 11 percent are ungraded or on a mill run basis. Only one-quarter of all sales are No. 1 and No. 2 common grades and only seven percent is of high quality, i.e. clear.

Table 3. Lumber Sales to Consumers. Percent of Various Grades of Boards and Dimension Lumber Marketed by Retailers.

Regional Species Group	Board Grades				Dimension	
	Clear	1 & 2 Common	3 Common & Poorer	Ungraded	Graded	Ungraded
Eastern	6.7	25.2	56.2	11.9	46.2	53.8
Western	15.4	36.3	46.6	1.6	99.3	0.7
Southern	13.0	82.9	4.0	0.1	100.0	0
Canadian	1.5	72.5	20.7	5.2	95.7	4.3

Number three common and poorer boards constitute the major proportion of western board sales by grades but are less than half of total board sales. Thus over half of western boards in stock are of better grades of lumber. Over 15 percent is of clear grades. Little western lumber is sold ungraded. The availability of western lumber in the upper grades, in volumes needed and also pre-graded, enhances its competitive position relative to eastern lumber.

Boards from the southern region and from Canada are of high quality. Over 80 percent of southern boards is in No. 1 and No. 2 common grades and an additional 13 percent is in the select grades. About 72 percent of Canadian boards is in No. 1 and No. 2 common grades.

Species of Boards

White pine is the most important single species produced in the northeast. Region-wide, however, eastern white pine boards are stocked by only half of the yards. In contrast, western white pine boards are stocked by two-thirds of all regional retailers. Maine, New Hampshire, and Vermont yards stock the most eastern white pine (Figure 12).

West Virginia and Pennsylvania reported the greatest percent of yards carrying southern pine boards, 75 percent of all yards in West Virginia and about 45 percent of Pennsylvania's yards. Price advantages and availability of this species to local retail yards account for intra-regional differences.

Other eastern species are of relatively little importance compared to white pine. On the average, 17 percent of all regional firms reported carrying hemlock, 19 percent carry eastern spruce and only about 5 percent carry eastern fir. The northern New England states are in all cases the leaders in stocking these eastern species.

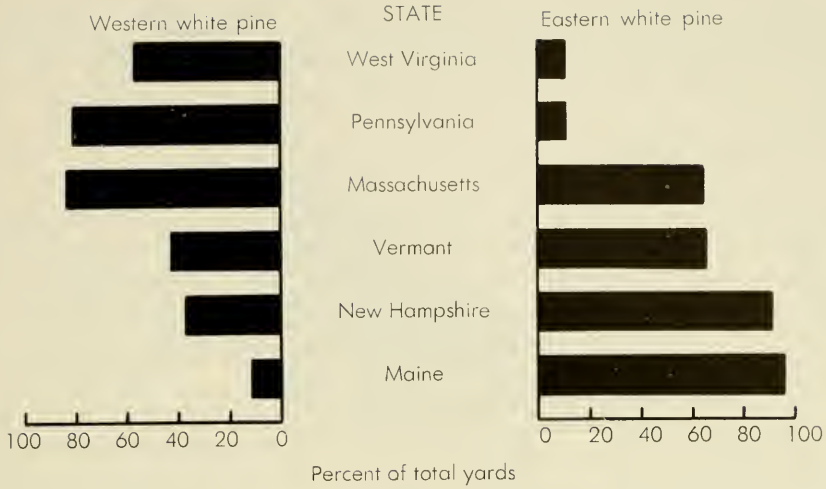

FIGURE 12. PERCENT OF REGIONAL RETAILERS PURCHASING EASTERN AND WESTERN WHITE PINE BOARDS BY STATES.

Western species of boards dominate northeastern markets (Figure 13). Western white pine is the leader in this species group, followed by ponderosa pine and redwood. Fifty percent of the yards, principally in the southern portion of the region, stock ponderosa pine. Redwood is stocked by 45 percent of the regional yards. The stocking of this species by yards of the various states indicates that its use is universal through the region. Over one-half of the yards in Massachusetts and West Virginia, and over one-third of the yards in Pennsylvania and Vermont, report stocking redwood. Western spruce is also an important species

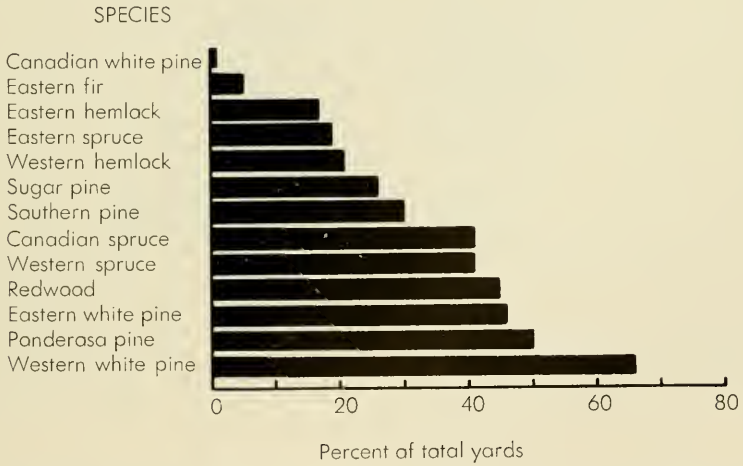

FIGURE 13. PERCENT OF REGIONAL RETAIL YARDS STOCKING VARIOUS SPECIES OF BOARDS.

as over one-half of the retail dealers in New Hampshire, Vermont and Massachusetts report stocking it. Canadian spruce boards are stocked by about two-thirds of the yards in all states except New Hampshire.

Dimension Lumber

The volume of dimension lumber sold in the region is nearly twice the volume of boards. Despite this fact eastern sawmills tend to produce more boards than dimension. Although eastern species will make satisfactory dimension, sawmill owners have seemed to be unaware of this market. Western species comprise 74 percent of the dimension lumber sales in the region; further, 60 percent of the total lumber sales are western dimension. Imports of Canadian lumber are two-thirds dimension stocks.

Less than one-half of the dimension lumber from eastern sources is sold graded. A previous study[1] showed that about 40 percent of the softwood lumber sold by sawmills was graded before selling. Thus, purchases directly from sawmill firms are likely to be ungraded. Eastern dimension lumber purchased through wholesalers and all dimensions from other regions is graded before sale.

All retail yards in all states sold graded Canadian dimension with the exception of Maine. In that state about 50 percent Canadian dimension was sold ungraded. This may be due to the particular source of Canadian lumber and to the competitive price of Maine produced eastern spruce.

Species of Dimension Lumber

Western species of dimension lumber dominate most markets in the Northeastern region (Figure 14). Douglas fir is the most important species and is carried in stock by two-thirds of all regional retail yards. Western hemlock, spruce and firs are stocked by half of these yards.

In general, each state follows the regional pattern; however, western species are stocked by a smaller percentage of the yards in the more northerly states. Only about one-third of Maine retailers stock Douglas fir as most of their yards stock eastern species for dimension. Canadian spruce dimension is stocked by one-third of all yards. However, over 50 percent of Maine, Vermont and Massachusetts yards stock it, while less than 20 percent of the yards in the other states carry it in stock.

Eastern dimension species are of relatively little importance region-wide, although they receive considerable use in some areas, particularly Maine. Eastern hemlock and spruce, are stocked by about one-fifth of all yards but they are stocked by over three-fourths of Maine retail yards.

The advantages of western species are many compared to eastern species. Western dimension is well manufactured, available in long lengths and large sizes, and in volume. It is also carefully graded and grade marked.

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[1] Marketing of lumber produced by sawmills in the Northeast. Phase 1. Bull. 478. 1962. West Va. Agric. Exp. Sta.

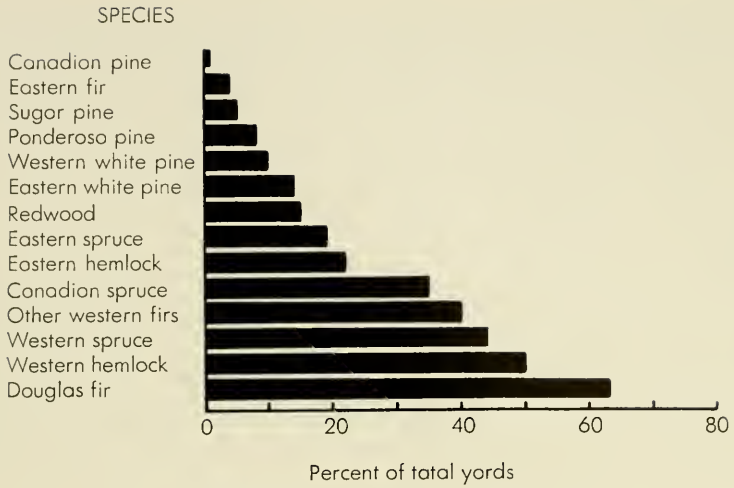

FIGURE 14. PERCENT OF REGIONAL RETAILERS STOCKING VARIOUS SPECIES OF DIMENSION LUMBER.

Length of Dimension Lumber

The majority of softwood dimension lumber, bought from retail yards is less than 16 feet in length (Figure 15). This is true for all states, although lumber of these lengths comprises a greater percentage of total purchases from eastern and southern sources than from western or Canadian. Longer lengths are generally from western and Canadian species.

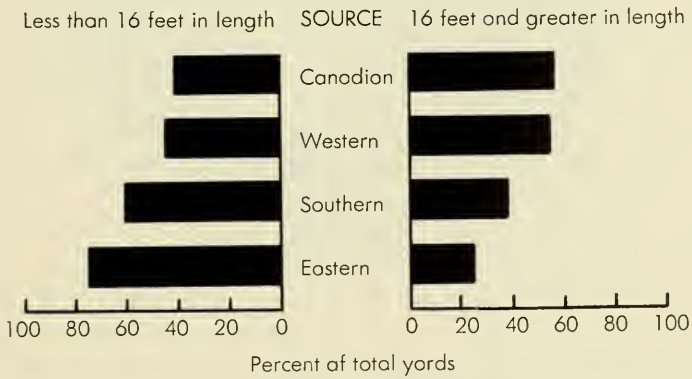

FIGURE 15. LENGTH OF DIMENSION LUMBER PURCHASED BY SPECIES SOURCE.

PRODUCT TRANSFORMATIONS

Most retail yards in the northeastern region perform one or more product transformations on a portion of the lumber handled by them. These transformations entail storage, either under cover or in the open,

seasoning, grading, grade marking, and finishing and/or surfacing. The first of these is not truly a transformation because it is an activity engaged in to maintain the condition of lumber as it is received. Other processes are carried out to a limited degree but are more nearly manufacturing, and therefore are not as common to retail market outlets. As will be noted, these latter processes are most prevalent where eastern species make up a significant percentage of retail lumber sales.

Storage

Approximately 38 percent of the regional retail yards store all lumber under cover, as opposed to about 5 percent who store all lumber in the open (Figure 16). The remaining firms store their lumber using a combination of these two methods. More than 50 percent of the firms in Pennsylvania and West Virginia indicate all lumber is kept under cover. Only 8 percent of Maine firms and 10 percent of Massachusetts firms use cover storage for all lumber marketed. This may be related to geographic variability in susceptibility of wood to stain fungi and/or the degree of seasoning prior to receipt of the lumber.

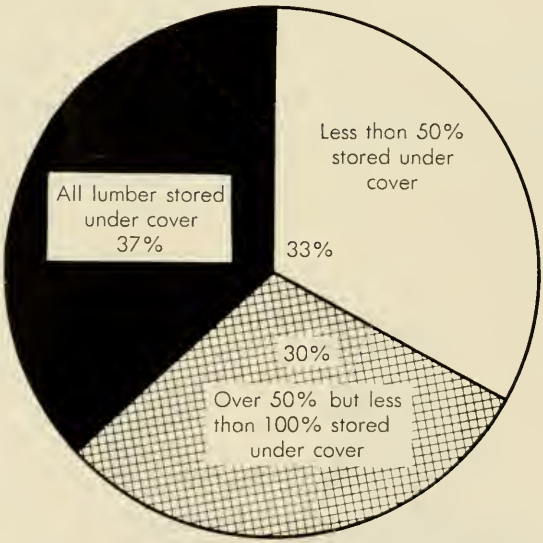

FIGURE 16. PERCENT OF ALL YARDS STORING LUMBER.

Significant differences exist in lumber storage according to dollar sales volume classes. In general, larger firms store relatively more lumber in the open than do smaller firms. About 45 percent of the smaller retail yards store all lumber under cover, whereas, in contrast, only 23 percent of the largest yards store all lumber in this manner. Lack of covered storage for a higher proportion of lumber in large yards may be accounted for by size of inventories, high cost of providing sheds for all lumber storage, and also the lack of need for storing some types of lumber under cover.

Thirty-three percent of all firms market a portion of their lumber directly without storage, although somewhat less than 25 percent of the volume is handled in this manner. In New Hampshire and Massachusetts, two-thirds of the retail yards market some lumber without storage.

Seasoning

Lumber seasoning by retail yards is not important in the states covered by this study (Figure 17). About 77 percent of all yards indicate that no lumber is air dried by them and 96 percent indicate no kiln drying. Twenty-three percent of all firms indicate some lumber seasoning between time of purchase and sale.

Only a small percentage of retailers in any state kiln dry lumber before selling. Those which carry out this transformation, however, are dispersed throughout all size classes. Air seasoning is significantly more prevalent in Maine (40%), New Hampshire (33%), and Vermont (35%) where a greater percentage of lumber sales are of eastern species.

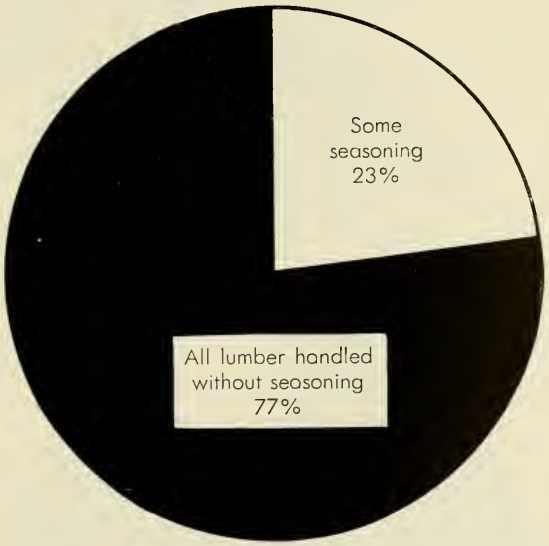

FIGURE 17. PERCENT OF ALL RETAIL YARDS SEASONING LUMBER.

Grading

Approximately 90 percent of the regional retail yards do not grade lumber (Figure 18). Of the remaining 10 percent that do, only about 2 percent grade all they sell. The others grade only a portion of their total sales volume. Those firms grading part or all of their sales volume are rather evenly disbursed throughout the various size classes. Grading is most important in northern New England where 31 percent of Maine retailers grade to some degree as contrasted to 3 percent in West Virginia yards.

FIGURE 18. PERCENT OF ALL RETAIL YARDS GRADING LUMBER.

Grade Marking

Although grade marking is less prevalent among retailers than grading, it closely follows the percentages for grading (Figure 19). About 92 percent of all yards do no grade marking and only 1.5 percent grade mark their total sales volume. There are no differences in grade marking by yard size classes.

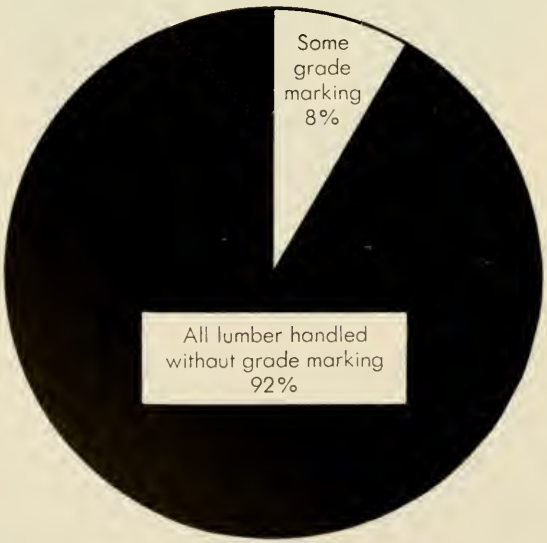

FIGURE 19. PERCENT OF ALL RETAIL YARDS GRADE MARKING LUMBER.

Finishing or Surfacing

Finishing or surfacing is carried on by 38 percent of the regional retail yards; however, of the total, 29 percent finish or surface less than 25 percent of their total sales volume (Figure 20). This type of product transformation is fairly evenly disbursed throughout all dollar sales volume classes and little difference is found between states.

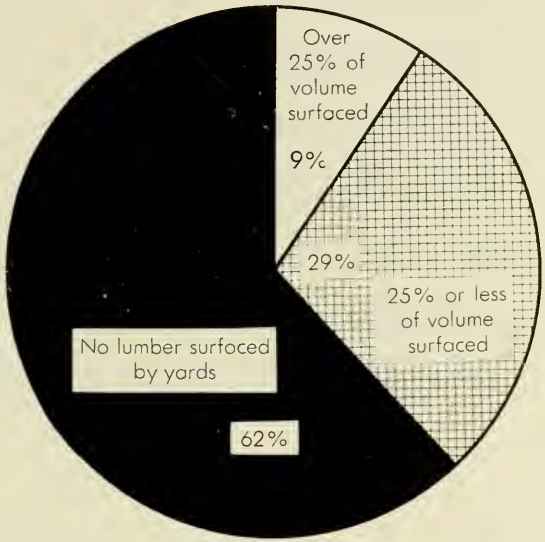

FIGURE 20. PERCENT OF ALL RETAIL YARDS SURFACING OR FINISHING LUMBER.

Thus retail lumber yards, except where vertically integrated, purchase a finished product "lumber" and depend upon the manufacturer or wholesalers to supply it to them in a condition ready for final sales to consumers or contractors.

REASONS FOR SPECIES CHOICES

The factors which influence a lumber yard owner or operator to choose one species over another have been only estimated previously. These factors were divided into two groups for this study: (a) the physical characteristics and (b) the economic factors. The answers received were separated into these two groups. No pre-determined list was used, nor were suggestions given to the interviewee.

Physical Factors

Quality of lumber is the leading physical factor affecting choice of all soft wood lumber purchased for retail distribution (Figure 21). Sizes and lengths available are the second most important physical factor. Other factors affecting purchase, listed in order of importance, are volume available in grade, conformance to grade, and moisture content.

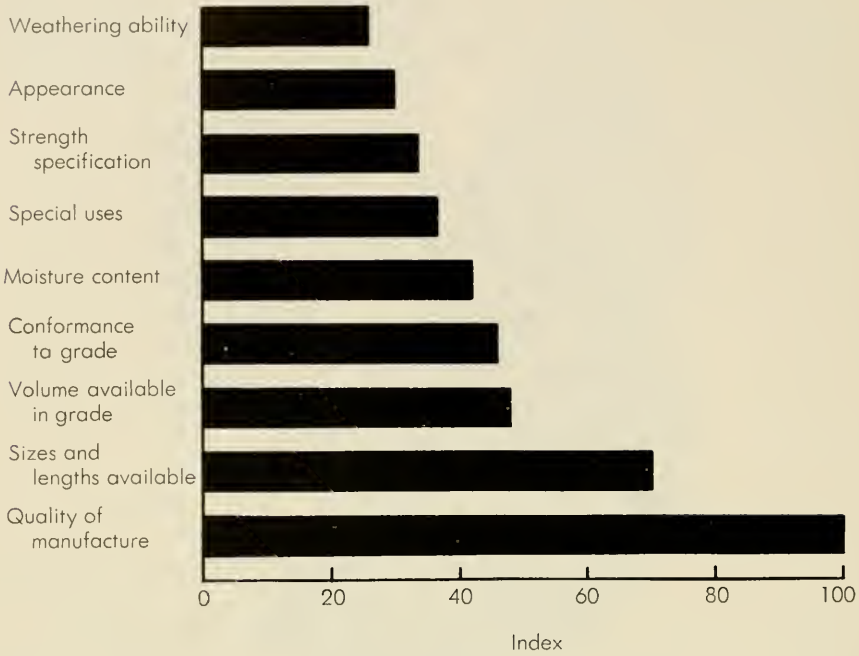

FIGURE 21. INDEX OF RELATIVE IMPORTANCE OF PHYSICAL FACTORS AFFECTING THE PURCHASE OF SOFTWOOD LUMBER BY RETAIL YARDS.

Weathering ability, appearance and strength specification are least important as considerations affecting purchases.

Physical factors affecting the purchase of lumber from a specific state generally conform to those mentioned above in the order given: however, there are some variations from this pattern. Yards purchasing eastern lumber are most influenced by quality of manufacture. Next in importance are weathering ability and special uses. There are no significant differences between sales volume classes as to factors influencing purchase of eastern lumber.

Most retailers reported that western lumber meets the physical condition requirements consistently and so it is stocked in volume.

For yards purchasing southern lumber, special uses is the chief physical factor. Although purchase of southern lumber is of minor importance throughout the region, quality of manufacture, conformance to grade and sizes available are reported as being next to special uses in physical characteristics most favorable to this lumber.

Economic Factors

Economic and institutional factors have more pronounced effects upon patterns of lumber purchased by retail yards than do physical characteristics.

Figure 22 indicates the order of importance of economic and institutional factors in the purchase of softwood lumber by the Northeastern Region retailers. Margin of profit and availability are the major factors affecting purchases. They are considered important by almost 100 percent of all retail yards studied. Contractors' specifications and other economic and institutional factors are considered important but to a much lesser degree. There are no apparent differences in the factors considered important by large yards as compared to those considered important by small yards.

The most important economic factor influencing purchase of eastern lumber by retailers is immediate availability. Most retailers report that possible margin of profit consistent with the physical requirements for the material is a very important consideration in any lumber purchase. Retail yards purchasing Canadian and southern lumber consider margin of profit to be the predominant factor influencing their decision. Immediate availability is second. The use of building codes, lumber grades and government loan building specifications tend to require lumber to meet the physical factors.

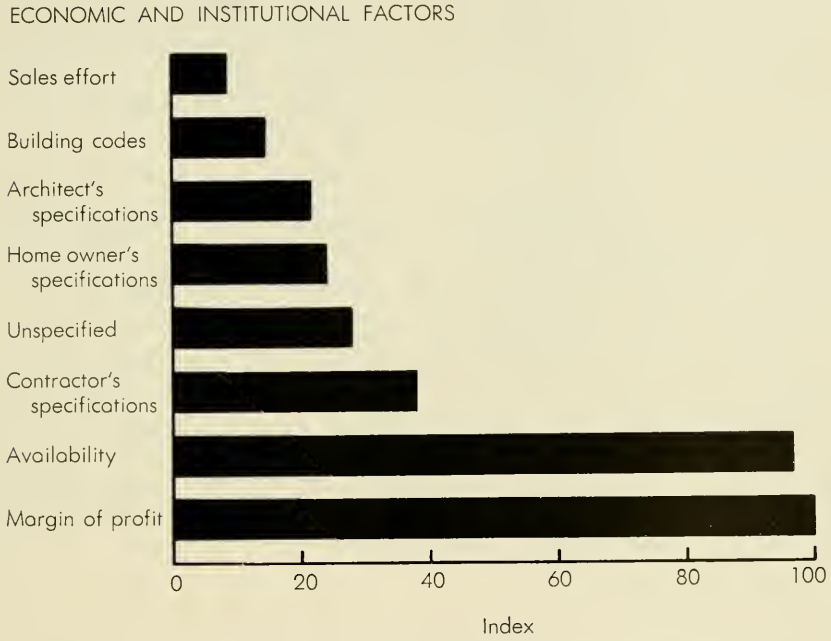

FIGURE 22. INDEX OF RELATIVE IMPORTANCE OF ECONOMIC AND INSTITUTIONAL FACTORS AFFECTING THE PURCHASE OF SOFTWOOD LUMBER BY REGIONAL RETAIL YARDS.

TYPES OF CONSUMERS

Retail lumber yards sell primarily to three consumer groups: building contractors, homeowners, and industrial plants.

Regional yards sell almost half of their total volume of lumber to building contractors. Homeowner's account for an additional one-third while industrial concerns buy 12.5 percent of total sales. All other consumer types accounted for the remaining 8 percent.

Building Contractors

A recent survey by the Southern Forest Experiment Station indicates that large building firms take advantage of wholesale buying from other than retail yards.[1] However, a 1960 Maine survey[2] indicates that metropolitan and Maine construction firms procure the bulk of their lumber needs from retail lumber yards. An earlier study[3] of Maine and New Hampshire lumber marketing indicates that construction consumers buy primarily from retailers. Retailers reported that they do sell to large volume purchasers at substantial discounts.

As retail yard size increases a greater proportion of their sales is to building contractors (Figure 23). Larger yards [$600,000 and over gross sales] sell 60 percent or more of their lumber to contractors.

By states, building contractors account for 57 percent of all sales in Massachusetts, Vermont, and New Hampshire, for over 40 percent in Maine and Pennsylvania, and for 39 percent in West Virginia.

Homeowner Sales

Homeowner's purchases have created an opportunity for lumber dealers to sell other products such as paint, hardware, and tools. With the present tendency toward more leisure time, do-it-yourself projects are increasing in number. The result is a steadily increasing market for wood as the actual numbers of single family dwellings increase.

Lumber sales to homeowners constitute a major market in West Virginia, 50 percent of all sales. Massachusetts contrasts to this with only 25 percent of retail lumber sales going to homeowners. Other states average 35 percent of their lumber sales volume to this market.

The sale pattern to homeowners is opposite to that for building contractors as a retail yard size changes (Figure 23). As yard size increases a smaller proportion of total lumber sales are to homeowners; the smallest yards sell 70 percent to this group.

Industry and Other Sales

Industry buys a small but significant amount of lumber from retail yards, 12.5 percent of their total sales. This represents over 100 million board feet in the six states studied. Seventy-two percent of all industrial

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[1] Clark, Row. 1964. Changing Role of Retail Dealers in Lumber Marketing. South Forest Experiment Station, New Orleans, La. 20 pp. illustrations.

[2] Brock, S. M. 1963. Marketing Maine Lumber to the Northeastern Building Construction Industry. Bull. 615. Maine Agric. Exp. Station, Orono.

[3] Wallace and Amidon. Ibid.

sales by retailers are reported by Massachusetts and Pennsylvania firms. This is partially a reflection of the industrial development in these two states, but also is due to the concentration of large retail lumber firms with multi-units in several states.

Ninety-five percent of sales to all "other" markets are in Maine and Pennsylvania. Sales by yard size classes show no pattern except that 68.5 percent of all lumber sold under this classification is by the largest yards.

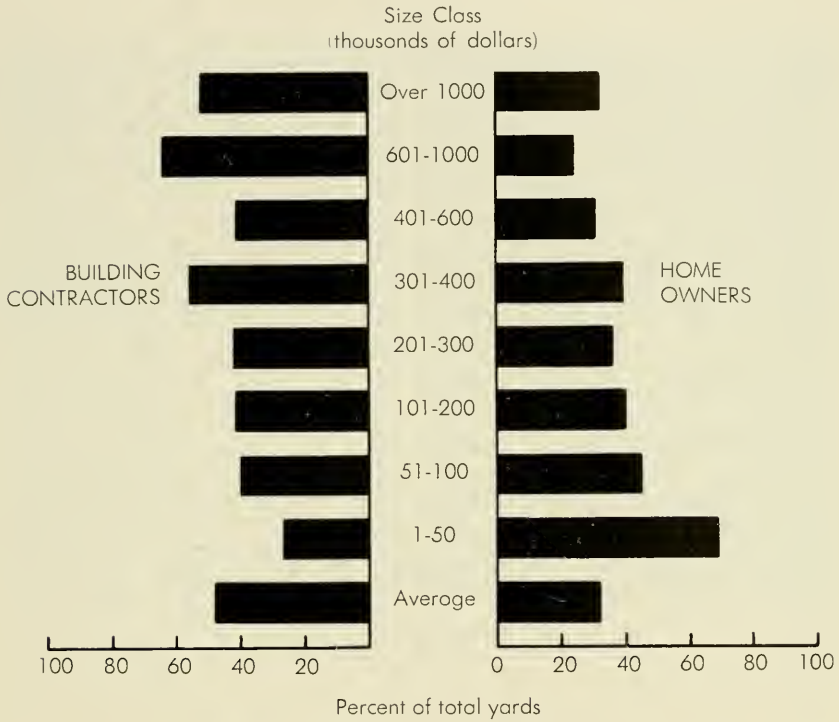


FIGURE 23. SALES OF LUMBER TO BUILDING CONTRACTORS AND HOME OWNERS BY YARD SIZE CLASSES.

METHODS OF PAYMENT FOR LUMBER BY CONSUMER GROUPS

The use of credit by retail lumber yard customers varies by type of customer. Only one-third of all lumber sales are on credit. Building contractors use credit twice as much as other customers, over 50 percent of their volume of lumber purchases.

Table 4. Method of Payment to Retailers for Lumber by Type of Consumer, Volume in Percent.

Type of Buyer	Methad of Payment		
	Cash	Credit	Advance
		Percent	
Building Contractor	48.8	50.7	0.5
Industry	64.2	26.2	9.5
Home Owner	74.3	24.1	1.6
Average	62.4	33.7	3.9

Homeowners and industry purchasers buy primarily "for cash" with homeowners purchasing three-quarters of their wood needs without the use of credit. Industry makes 10 percent of its purchases by advance payments and is the only significant user of this type of payment.

Thus, in the region, retail yards sell more lumber on a cash basis (62 percent) than on a credit basis (34 percent). Only four percent of sales are made by advance payments. Maine and Vermont yards sell more on credit than other states studied in the region.

DELIVERY TO CONSUMERS

Lumber and building material are bulky merchandise which most retail lumber yards deliver to their customers, particularly for volume orders.

About 80 percent of contractor purchases are delivered by the retailer at no additional charge (Table 5). Only about 3 percent are delivered at extra cost to the contractor. Throughout the region about 17 percent of all contractor purchases are presumably transported at their own expense. Only Pennsylvania differed significantly from the regional averages. There, retailers are responsible for delivery of slightly less than two-thirds of contractor purchases. The remaining one-third is transported by the buyer.

Table 5. Method of Delivery to Consumer by Type of Consumer in Percent of Volumes.

Type of Buyer	Delivery		
	Delivered: no charge	Delivered: extra charge	Not delivered
		percent	
Building Contractor	80.2	2.9	16.9
Industry	72.0	11.6	16.4
Homeowner	64.9	11.4	23.7
Average	72.4	8.6	19.0

Retailers deliver two-thirds of homeowner purchases at no extra charge. About 10 percent of their purchases are delivered at extra charge and the remaining one-fourth is not delivered. Homeowners make many small purchases which they can transport themselves or for which they do not want to wait for delivery. For the region, 72 percent of all lumber sold by retail yards is delivered free of direct transportation charges to the customer. Only 9 percent is delivered at extra cost. The remaining 19 percent is transported by the buyer.

Retail yards now furnish the builder and homeowner with a greater variety of goods and services

CONCLUSIONS

Retail lumber yards of the Northeast are no longer just "lumber yards." They sell any products that may be useful to homeowners and building contractors. Lumber sales are less than 40 percent of these retailers' gross annual dollar sales volume. However, wood product sales exceed 80 percent of total dollar sales volumes.

The lumber available to customers is mostly of western species, especially in dimension stocks. 66 percent of all purchases. However, all yards do stock eastern softwoods. Large western firms are able to produce lumber that will meet construction codes and loan institutions requirements. About 50 percent of western shipments to retailers are kiln dried, while only 14 percent of eastern lumber is. Eastern lumber is not available in large quantities, kiln dried.

Lumber yard retailers procure 68 percent of their lumber from market intermediaries, the remainder directly from producers. Most yards buy some lumber directly from sawmill firms, however. Vertical integration at both ends of the size scale of firms is evident. Thus, owners expect to absorb the costs and the profits of the middlemen.

The volume of dimension lumber sold in the region is nearly twice the volume of boards. Plywood and other type sheathing have replaced boards to a substantial amount in construction uses. Despite this, eastern sawmill owners are producing twice the volume of boards over dimension. Even imports from Canadian sources are two-thirds dimension stocks.

Most dimension lumber is purchased in 16-foot lengths or less: only 16 percent is over 16 feet. All of this latter stock comes from Canadian and western sources. Eastern species are mostly cut into shorter lengths and this may contribute to its lack of manufacture as dimension. Western and Canadian stocks are over 50 percent 16 feet or longer lengths.

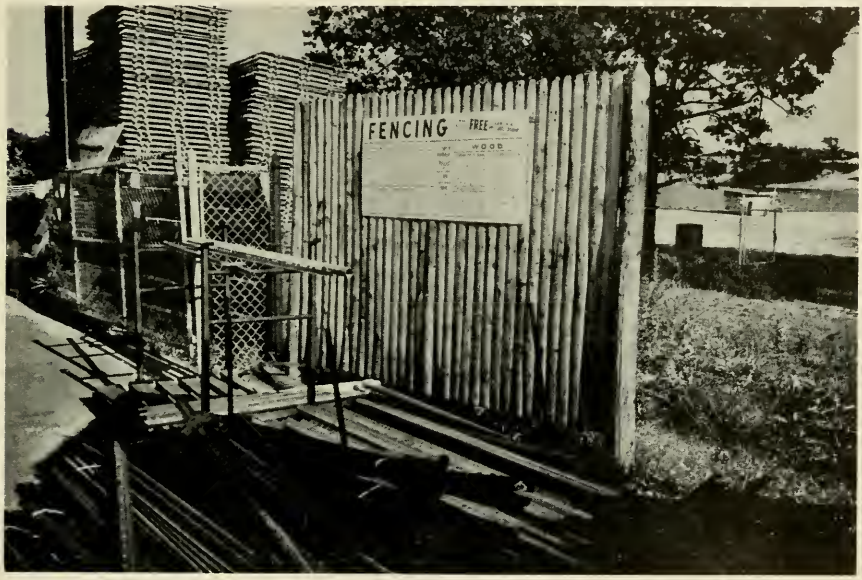
Retail yards are purchasing lumber as a finished product ready for sale. Such operations as lumber grading, grade marking, surfacing or dressing, and seasoning have been performed by producers or middlemen for the retailer whose unit is a store, not a shop. A few yards do carry out some or all of these operations but they are usually vertically integrated.

The most important factor influencing purchase of eastern lumber by retailers is its immediate availability. However, the most important factor for all lumber species is quality of manufacture. Eastern producers have not been able to meet western firms competition on this factor. In addition, size and lengths available are of primary importance; and again, eastern lumber is not available in the larger sizes and long lengths. While price is an important factor to all retailers, differences in quality between eastern and western lumber manufacturing gives western lumber a price advantage despite shipping distances.

The variety of services offered to customers by yard owners are substantial. Increasingly, aids are offered to fit wood to the job the customer has in mind. Very few customers understand grade differences in lumber or species differences. Help from sales people is essential. Written as well as verbal aids are evidence of aggressive retailing.

Retail lumber businesses are dependent upon home construction and maintenance. Yards have two major customer groups — homeowners and building contractors. Eighty percent of retailers' lumber supplies are sold to these customers. Industrial firms are the third most important customers. Volume of sales to these customers depends upon yard size class. Small yards sell mostly to homeowners while the largest yards sell mainly to construction contractors.

Retail lumber yards are becoming supermarkets for homeowners. Some are already locating in or near shopping centers. They offer both delivery and serve-yourself services. Whether one is planting new shrubs or repairing broken stairs, they can supply these needs.



Fencing — one of many manufactured woods products sold by retail yards

Marketing of Lumber by Retail Lumber Yards in the Northeast — Phase III.

NEM-24 Technical Committee

Retail lumber yards sell any product that may be useful to building contractors and homeowners. They sell mostly non-eastern species for lumber.

Bulletin No. 487, May, 1965, University of New Hampshire Agricultural Experiment Station.